

PATENT

Atty. Dkt. No. APPM/004150.D1(Y1)ETCH/DRIE/PJS

**REMARKS**

This is intended as a full and complete response to the Final Office Action dated July 26, 2005, having a shortened statutory period for response set to expire on October 26, 2005. Please reconsider the claims pending in the application for reasons discussed below.

Claims 1-39 remain pending in the application and are shown above. Claims 1-39 are rejected by the Examiner. Claim 1 has been amended to clarify the invention. Reconsideration of the rejected claims is requested for reasons presented below.

**Rejections under 35 U.S.C. §102(a) and 103(a) over *Pu, et al.*, (WO 99/48130):**

Claims 1-3, 5, 11-12, 14-17, 20-23, 25-26, 28-31 and 33-39 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *Pu, et al.*, WO 99/48130, in view of *Masuda, et al.* U.S. Patent No. 6,171,438. Claims 4 and 18-19 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *Pu, et al.* WO 99/48130, in view of *Masuda, et al.* U.S. Patent No. 6,171,438 as applied to claims 1-3, 5, 11-12, 14-17, 20-23, 25-26, 28-31, 33-35, and 38-39 above, and further in view of *Collins, et al.* EP 0 807 953 A1. Claims 6, 13, and 27 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *Pu, et al.* WO 99/48130, in view of *Masuda, et al.* U.S. Patent No. 6,171,438 as applied to claims 1-3, 5, 11-12, 14-17, 20-23, 25-26, 28-31, 33-35, and 38-39 above, and further in view of *Reimold, et al.*, DE 31 10489 A1. Claims 24 and 32 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *Pu, et al.* WO 99/48130 in view of *Masuda, et al.* U.S. Patent No. 6,171,438 as applied to claims 1-3, 5, 11-12, 14-17, 20-23, 25-26, 28-31, 33-35, and 38-39 above, and further in view of *Banholzer, et al.* U.S. Patent No. 5,565,058. Claims 7-10 and 38-39 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *Pu, et al.* WO 99/48130, in view of *Shan, et al.* EP 0 814 495. Claims 1-3, 5, 11-12, 14-17, 20-23, 25-26, 28-31, 33-35, and 38-39 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *Pu, et al.* WO 99/48130, in view of *Lee*, U.S. Patent No. 5,616,208. Claims 4 and 18-19 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *Pu, et al.* WO 99/48130, in view of *Lee*, U.S. Patent No. 5,616,208, as applied to claims 1-3, 5, 11-12, 14-17, 20-

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23, 25-26, 28-31, 33-35, and 38-39 above, and further in view of *Collins, et al.*, EP 0 807 953 A1. Claims 6, 13 and 27 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *Pu, et al.*, WO 99/48130 in view of *Lee*, U.S. Patent 5,616,208 as applied to claims 1-3, 5, 11-12, 14-17, 20-23, 25-26, 28-31, 33-35, and 38-39 above, and further in view of *Reimold, et al.* DE 31 10489. Claims 24 and 32 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *Pu, et al.*, WO 99/48130 in view of *Lee*, U.S. Patent No. 5,616,208 as applied to claims 1-3, 5, 11-12, 14-17, 20-23, 25-26, 28-31, 33-35 and 38-39 above, and further in view of *Banholzer, et al.* U.S. Patent No. 5,565,058. Claims 7-10 and 38-39 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *Pu, et al.*, WO 99/48130, in view of *Shan, et al.*, EP 0 814 495. Claim 36 stands rejected under 35 U.S.C. §103(a) as being unpatentable over *Pu, et al.*, WO 99/48130. Claim 37 stands rejected under 35 U.S.C. §102(a) as being anticipated by *Pu, et al.*, WO 99/48130. Applicants respectfully traverse the rejections.

The Applicants submit, along with this paper, a declaration under 35 U.S.C. 1.131 that has been executed by one of the inventors of the claimed invention. The declaration is offered as evidence of a conception and reduction to practice date for the invention claimed in the above-identified patent application to be on or before September 23, 1999. The declaration is further offered as evidence of conception and reduction to practice in a NAFTA country. In view of this declaration, the Applicants submit that *Pu* is a 102(e)-type reference, since *Pu, et al.* was published after the Applicants' March 7, 2000 filing date.

As the inventors of both *Pu, et al.* and the present application were employees of Applied Materials, Inc., at the time of their respective inventions, the inventors were obligated to assign the rights to their invention to Applied Materials, Inc. Thus, the Applicants' invention and *Pu, et al.* were commonly assigned at the time of the Applicants' invention. Since this application is filed after November 29, 1999, *Pu, et al.* does not preclude patentability under the provisions of 35 U.S.C. § 103(c), as amended by the American Inventors Protection Act of 1999. See, MPEP 706.02(I)(1). Accordingly, the Applicants respectfully request the rejections under 35 U.S.C. §103 over *Pu, et al.* to claims 1-36 and 38-39 be withdrawn. The Applicants further request that the rejection under 35 U.S.C §102(a) to claim 37 be withdrawn.

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**Rejections under 35 U.S.C. §103(a) over *Shan, et al.*, EP 0 814 495, in view of *Lee*, U.S. Patent No. 5,616,208:**

Claims 1-3, 5, 7, 7-12, 14-17, 20-23, 25-26, 28-31 and 33-39 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *Shan, et al.*, EP 0 814 495, in view of *Lee*, U.S. Patent No. 5,616,208. Applicants respectfully traverse the rejection on grounds that the references, alone or in combination, do not teach, suggest, or provide the requisite motivation for combination to make the invention as claimed.

The reference *Shan, et al.* teaches an anode shield [10] adjacent a chamber wall [20] and a cathode shield [12] adjacent a cathode [30] describing a preferred embodiment including channels "... surrounding the chamber side wall 20 through which cool water is pumped so as to maintain the chamber wall at a temperature of about 65°C." (page 9, lines 30-32). As such, *Shan, et al.*, does not teach, show, or supply motivation to include passages within the shields [10, 12]. By contrast, the reference *Lee* teaches a medium path [123] in a wall of a header [90] and a medium path [129] in a wall portion with no mention of liners, jackets, or shields throughout the entire application.

Applicants submit that *Shan, et al.* and *Lee* do not teach, show, suggest, or provide motivation for an apparatus for lining a processing chamber that defines a processing volume comprising a base for substantially covering a bottom of the chamber, an inner wall connected to and extending upward from an inner side of the base, and a substantially annular passage formed in the base or the base and the inner wall, the passage having an inlet and an outlet adapted to circulate a fluid through the passage, wherein the passage is fluidly isolated from the processing volume, as recited in claim 1. Withdrawal of the rejection to claim 1, and claims dependent thereon, is respectfully requested.

Applicants submit that *Shan, et al.* and *Lee* do not teach, show, suggest, or provide motivation for a liner comprising a center member, a flange circumscribing the

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center member, a cylindrical wall projecting upward from the center member in side the flange, and a substantially annular passage formed in the center member and having an inlet and an outlet adapted to circulate a fluid therethrough, as recited in claim 7. Withdrawal of the rejection to claim 7, and claims dependent thereon, is respectfully requested.

Applicants submit that *Shan, et al.* and *Lee* do not teach, show, suggest, or provide motivation for an apparatus for lining a processing chamber comprising a liner having a base including a passage to fluidly isolate a heat transfer fluid, the passage being fluidly isolated from a processing region, as recited in claim 11. Withdrawal of the rejection to claim 11, and claims dependent thereon, is respectfully requested.

Applicants submit that *Shan, et al.* and *Lee* do not teach, show, suggest, or provide motivation for an apparatus for lining a processing region in a processing chamber comprising an annular base having a substantially annular passage formed at least partially in the base, as recited in claims 25 and 33. Withdrawal of the rejection to claims 25 and 33, and claims dependent thereon, is respectfully requested.

Applicants submit that *Shan, et al.* and *Lee* do not teach, show, suggest, or provide motivation for an apparatus for lining a processing region in a processing chamber, comprising a center section having a substantially annular passage at least partially formed in the center section, as recited in claim 36. Withdrawal of the rejection to claim 36 is respectfully requested.

Applicants submit that *Shan, et al.* and *Lee* do not teach, show, suggest, or provide motivation for an apparatus for lining a processing region in a processing chamber, comprising a center member having a substantially annular passage at least partially formed in the center member, as recited in claim 37. Withdrawal of the rejection to claim 37, and claims dependent thereon, is respectfully requested.

**Rejections under 35 U.S.C. §103(a) over *Shan, et al.*, EP 0 814 495, in view of *Masuda, et al.* U.S. Patent No. 6,171,438:**

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Claims 1-3, 5, 11-12, 14-17, 20-23, 25-26, 28-31 and 33-39 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *Shan, et al.* in view of *Masuda, et al.* Applicants respectfully traverse the rejection on grounds that the references, alone or in combination, do not teach, suggest, or provide motivation for the invention as claimed.

The reference *Shan, et al.* is discussed above and does not teach or suggest any passages formed in the liners. *Masuda, et al.* teaches a "... jacket 103 is held in a sidewall 102...." (col. 9, lines 52-54) and provides no teaching or motivation to extend the jacket to cover the lower portion of the chamber.

Applicants submit that *Shan, et al.* and *Masuda, et al.* do not teach or suggest an apparatus for lining a processing chamber that defines a processing volume comprising a base for substantially covering a bottom of the chamber, an inner wall connected to and extending upward from an inner side of the base, and a substantially annular passage formed in the base or the base and the inner wall, the passage having an inlet and an outlet adapted to circulate a fluid through the passage, wherein the passage is fluidly isolated from the processing volume, as recited in claim 1. Withdrawal of the rejection to claim 1, and claims dependent thereon, is respectfully requested.

Applicants submit that *Shan, et al.* and *Masuda, et al.* do not teach or suggest an apparatus for lining a processing chamber comprising a liner having a base including a passage to fluidly isolate a heat transfer fluid, the passage being fluidly isolated from a processing region, as recited in claim 11. Withdrawal of the rejection to claim 11, and claims dependent thereon, is respectfully requested.

Applicants submit that *Shan, et al.* and *Masuda, et al.* do not teach or suggest an apparatus for lining a processing chamber comprising an annular base having a substantially annular passage formed at least partially in the base, as recited in claims 25 and 33. Withdrawal of the rejection to claims 25 and 33, and claims dependent thereon, is respectfully requested.

While the Examiner maintains that *Shan, et al.* teaches a center section, *Shan, et al.* only suggests "...channels (not shown) surrounding the chamber side wall 20 through which cool water is pumped so as to maintain the chamber wall at a temperature of about 65°C." (page 9, lines 30-32). As such, Applicants submit that *Shan, et al.* and *Masuda, et al.* do not teach or suggest an apparatus for lining a

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processing chamber comprising a center section having a substantially annular passage at least partially formed in the center section, as recited in claim 36. Withdrawal of the rejection to claim 36 is respectfully requested.

As in the argument in reference to claim 36, Applicants submit that *Shan, et al.* and *Masuda, et al.* do not teach or suggest an apparatus for lining a processing chamber comprising a center member having a substantially annular passage at least partially formed in the center member, as recited in claim 37. Withdrawal of the rejection to claim 37, and claims dependent thereon, is respectfully requested.

**Rejections under 35 U.S.C. §103(a) over *Shan, et al.*, EP 0 814 495, in view of *Miyamoto, et al.* U.S. Patent No. 5,846,331:**

Claims 7-10 and 36-39 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *Shan, et al.* EP 0 814 495, in view of *Miyamoto, et al.* U.S. Patent No. 5,846,331. Applicants respectfully traverse the rejection on grounds that *Shan, et al.* and *Miyamoto, et al.* do not teach, suggest, or provide motivation for the invention as claimed.

The reference *Shan, et al.* is discussed above and does not teach or suggest any passages formed in the shields, and any suggestion of passages are channels "...surrounding the chamber side wall 20 through which cool water is pumped so as to maintain the chamber wall at a temperature of about 65°C." (page 9, lines 30-32). By contrast, *Miyamoto, et al.* teaches a dielectric member [1] having a flow path [5], a lower portion of the dielectric member in communication with a processing region and has no teaching or suggestion of a liner or liners throughout the entire application.

Applicants submit that *Shan, et al.* and *Miyamoto, et al.* do not teach or suggest a liner comprising a center member, a flange circumscribing the center member, a cylindrical wall projecting upward from the center member in side the flange, and a substantially annular passage formed in the center member and having an inlet and an outlet adapted to circulate a fluid therethrough, as recited in claim 7. Withdrawal of the rejection to claim 7, and claims dependent thereon, is respectfully requested.

Applicants submit that *Shan, et al.* and *Miyamoto, et al.* do not teach or suggest an apparatus for lining a processing region at least partially defined by walls of a

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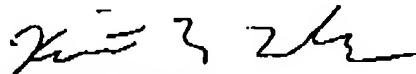
processing chamber, comprising a cylindrical liner section adapted to line at least a portion of the walls of the processing chamber, a center section coupled to one end of the cylindrical liner section to line at least a portion of the walls of the processing chamber, a center section coupled to one end of the cylindrical section, the cylindrical section and the center section being exposed to the processing region and comprising a single piece structure for substantially covering an upper surface of the chamber, and a substantially annular passage at least partially formed in the center section, as recited in claim 36, Withdrawal of the rejection to claim 36 is respectfully requested.

Applicants submit that *Shan, et al.* and *Miyamoto, et al.* do not teach or suggest an apparatus for lining a processing region at least partially defined by walls of a processing chamber, comprising a center member for substantially covering an upper surface of the chamber, a cylindrical wall extending from the a first side of the center member and adapted to line at least a portion of the walls of the processing chamber, and a substantially annular passage at least partially formed in the center member, the passage adapted to isolate a heat transfer fluid flowing therethrough from the processing volume, as recited in claim 37, Withdrawal of the rejection to claim 37, and claims dependent thereon, is respectfully requested.

In conclusion, the references cited by the Examiner, alone or in combination, do not teach, show, or suggest the invention as claimed.

Having addressed all issues set out in the Final Office Action, Applicant respectfully submits that the claims are in condition for allowance and respectfully request that the claims be allowed.

Respectfully submitted,



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